



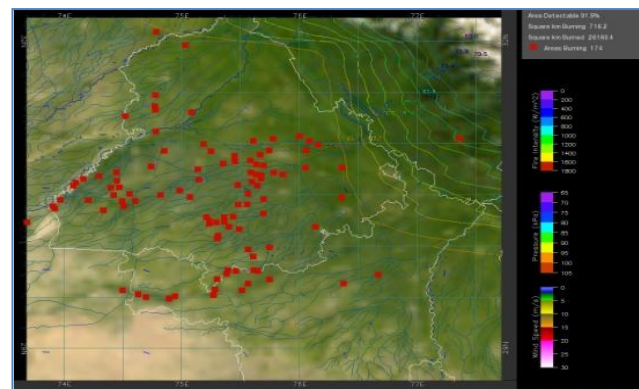
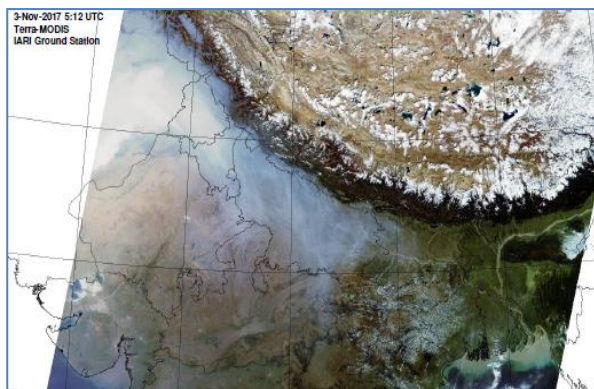
**Bulletin  
No. 13**

**Events Date:  
13-Oct-2018**

**Issued on:  
14-Oct-2018**



# **MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2018**



**Prepared by:**

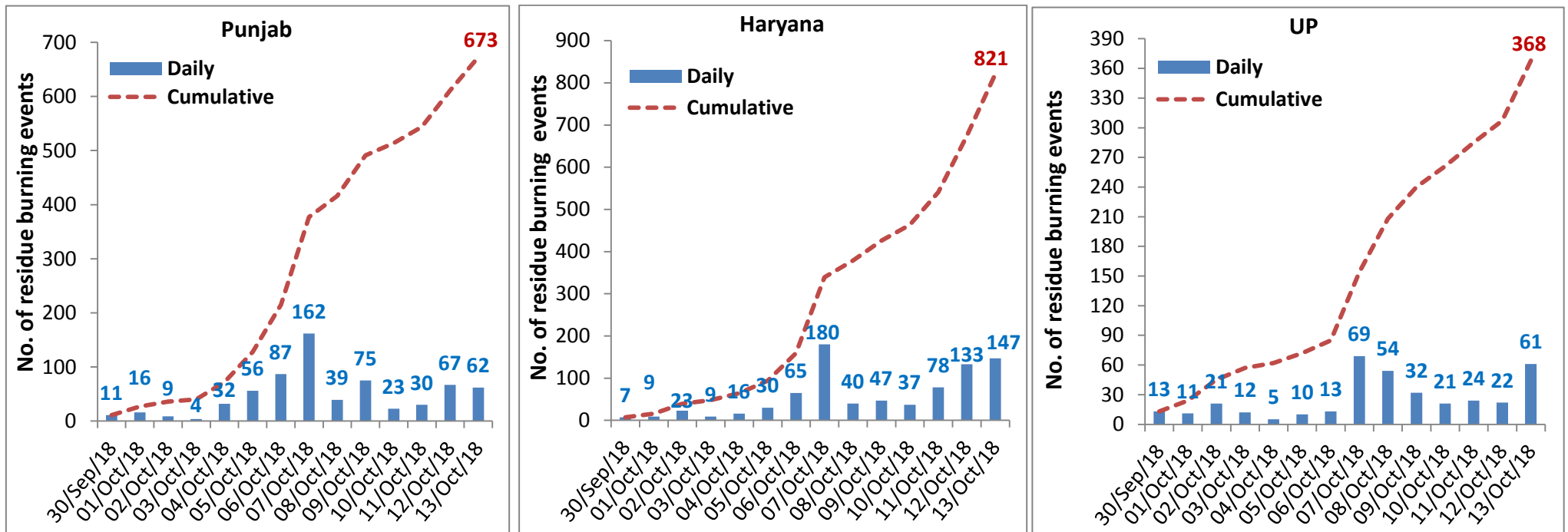
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,  
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

<http://creams.iari.res.in>

## Highlights for 13-October-2018

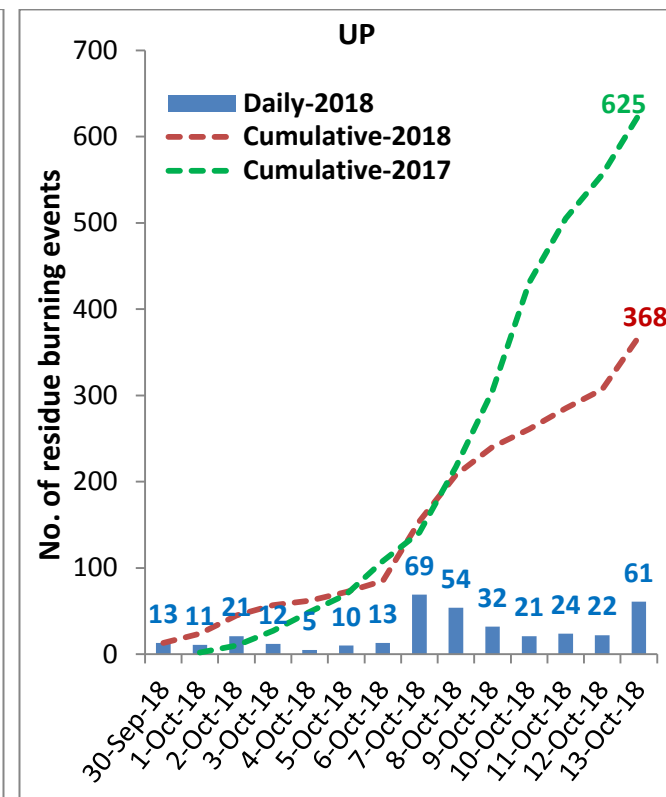
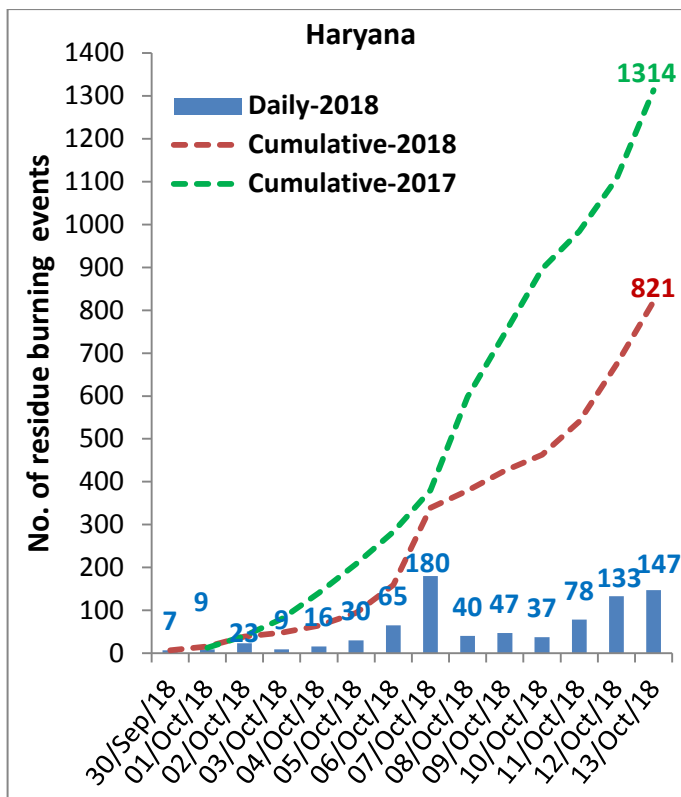
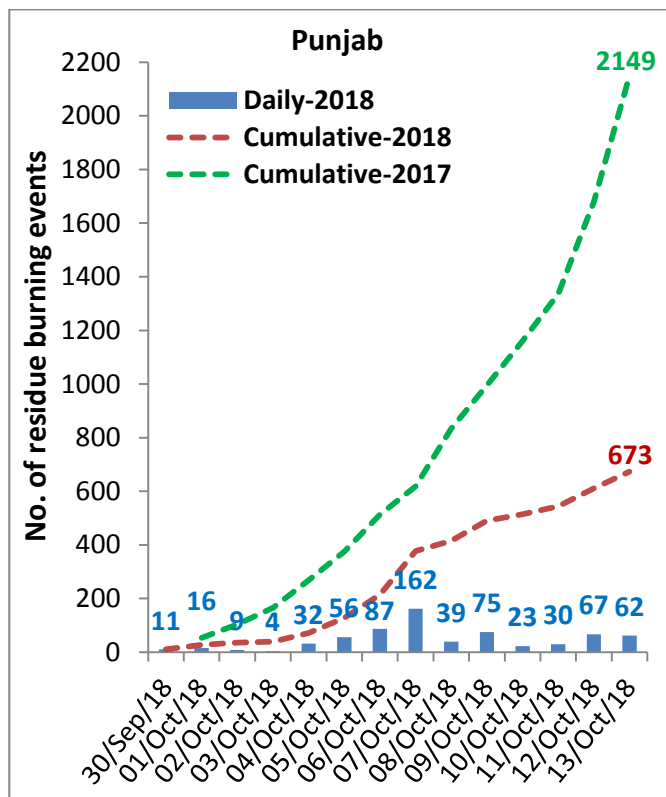
- Satellites detected 270 residue burning events in the three States (Punjab, Haryana & UP) on 13-Oct-2018.
- The burning events detected on 13-Oct-2018 are 62, 147 and 61 in Punjab, Haryana, and UP, respectively.
- The number of events increased marginally from 222 on 12-Oct-2018 to 270 on 13-Oct-2018 in the three States.
- Total 1862 burning events were detected in three States between 30-Sept-2018 and 13-Oct-2018, which were distributed as 673, 821 and 368 in Punjab, Haryana and UP, respectively.
- Till 13-Oct-2018, the burning events in the current year are about 45.5% of the events detected in 2017.

### Temporal distribution of residue burning events for the three study States

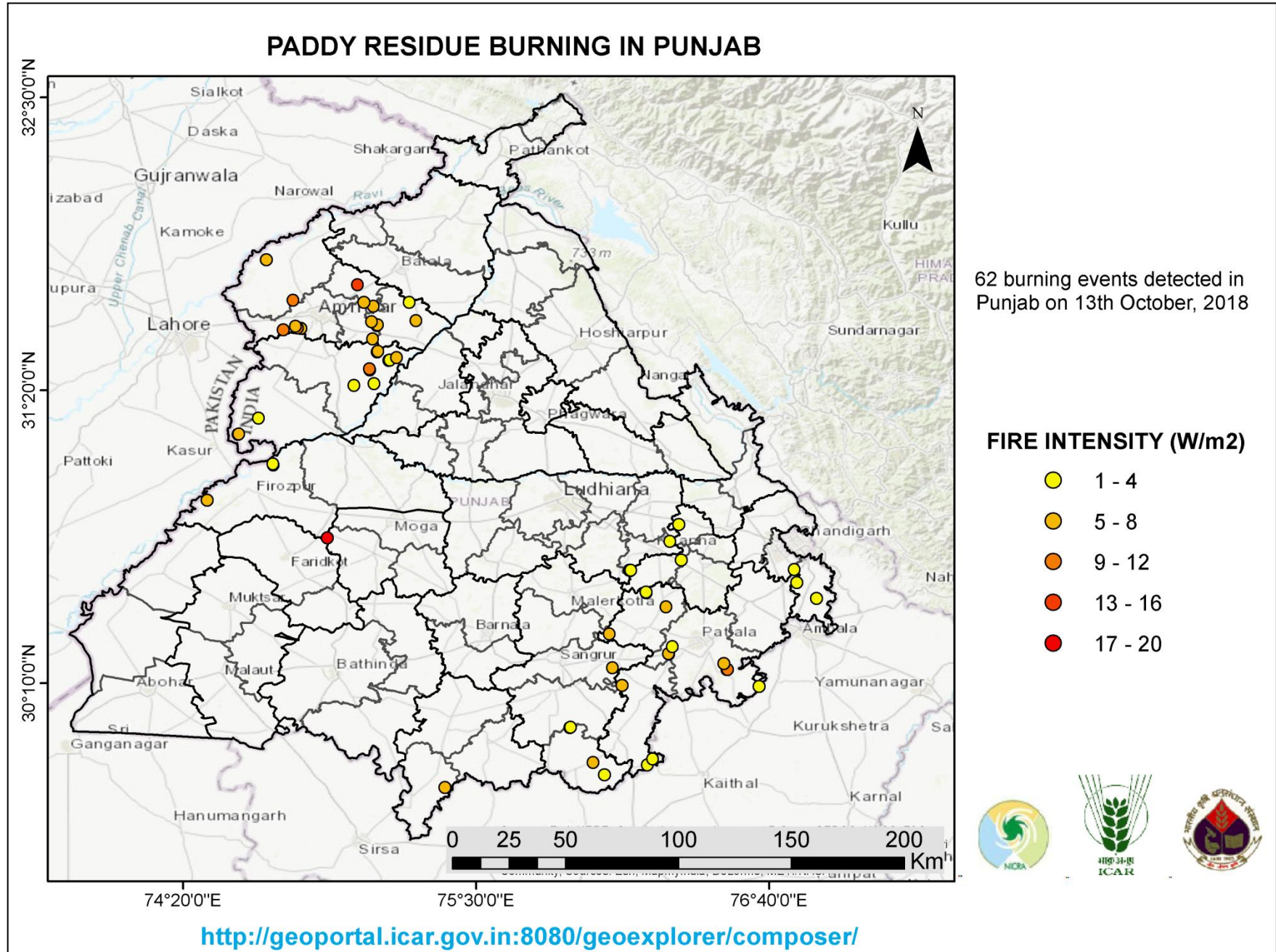


**Comparison of residue burning events in current year (2018) with previous year (2017) for the three study States**

**(30-Sep-2018 to 13-Oct-2018)**



(a) Punjab



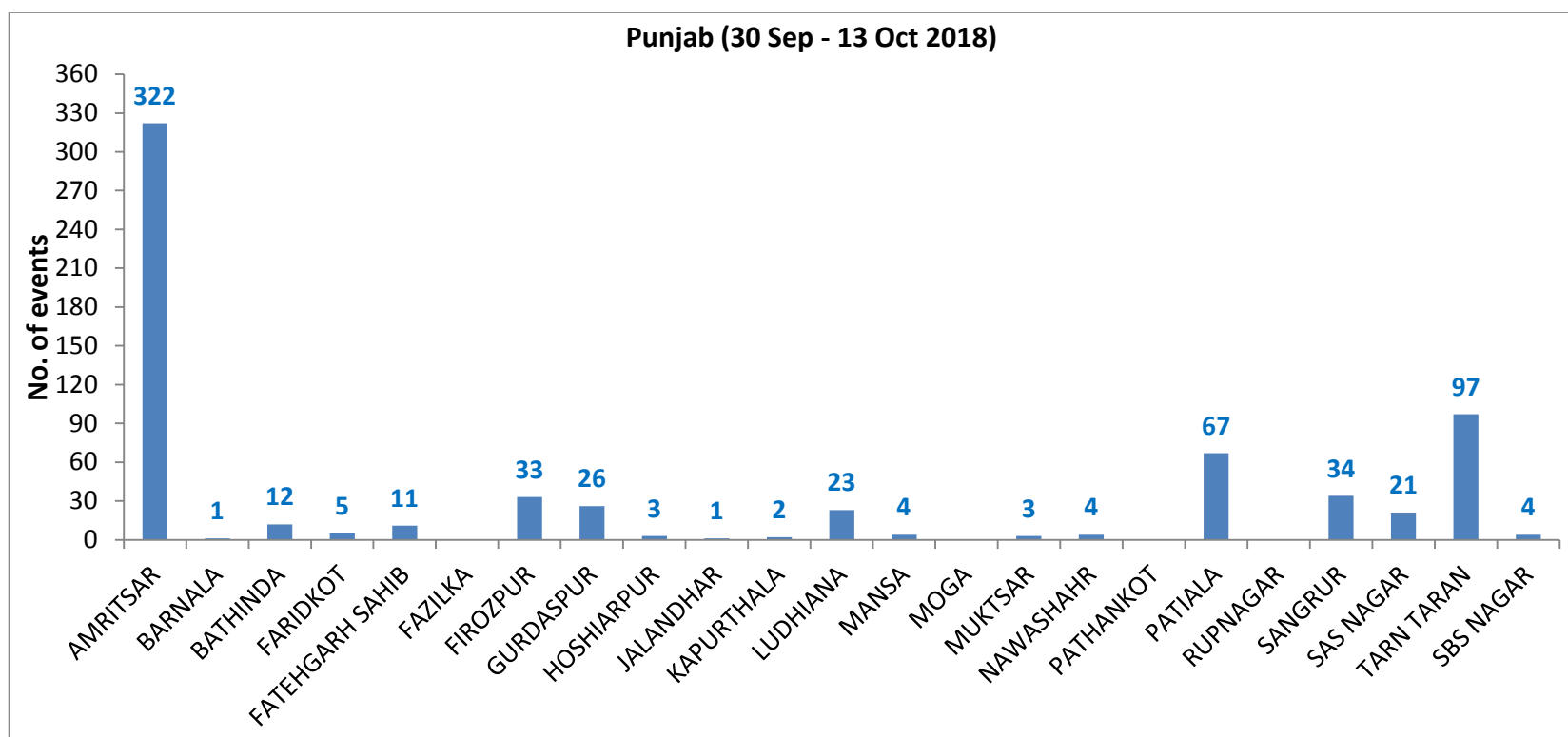
**Details of residue burning events in Punjab on 13-Oct-2018**

<b>Event S. No.</b>	<b>District</b>	<b>Tehsil / Block</b>	<b>Satellite</b>	<b>Longitude</b>	<b>Latitude</b>	<b>Time (IST)</b>	<b>Day/Night</b>	<b>Fire Power (W/m<sup>2</sup>)</b>
1	AMRITSAR	AJNALA	S-NPP	74.66309	31.85318	13:12:00	D	4.10
2	AMRITSAR	AMRITSAR I	S-NPP	75.10449	31.59118	13:12:00	D	3.30
3	AMRITSAR	AMRITSAR I	S-NPP	75.10658	31.59328	13:12:00	D	6.40
4	AMRITSAR	AMRITSAR I	S-NPP	75.05177	31.68397	13:12:00	D	5.90
5	AMRITSAR	AMRITSAR I	S-NPP	75.02660	31.75309	13:12:00	D	15.60
6	AMRITSAR	AMRITSAR II	S-NPP	74.73098	31.57413	13:12:00	D	8.80
7	AMRITSAR	AMRITSAR II	S-NPP	74.80055	31.57967	13:12:00	D	6.80
8	AMRITSAR	AMRITSAR II	S-NPP	74.78831	31.58131	13:12:00	D	8.80
9	AMRITSAR	AMRITSAR II	S-NPP	74.78067	31.58787	13:12:00	D	4.90
10	AMRITSAR	AMRITSAR II	S-NPP	74.76980	31.69140	13:12:00	D	8.30
11	AMRITSAR	BABA BAKALA	S-NPP	75.08675	31.53802	13:12:00	D	7.90
12	AMRITSAR	BABA BAKALA	S-NPP	75.08334	31.60686	13:12:00	D	5.00
13	AMRITSAR	BABA BAKALA	S-NPP	75.26018	31.61049	13:12:00	D	6.10
14	AMRITSAR	BABA BAKALA	S-NPP	75.09029	31.66757	13:12:00	D	4.30
15	AMRITSAR	BABA BAKALA	S-NPP	75.23311	31.68300	13:12:00	D	2.60
16	FATEHGARH SAHIB	ALMOH	S-NPP	76.31621	30.65709	01:54:00	N	1.70
17	FATEHGARH SAHIB	KHAMANOH	S-NPP	76.30543	30.79849	13:12:00	D	3.50
18	FIROZPUR	FIROZPUR	S-NPP	74.90591	30.74512	13:12:00	D	16.20
19	FIROZPUR	FIROZPUR	S-NPP	74.42869	30.89508	13:12:00	D	4.50
20	FIROZPUR	FIROZPUR	S-NPP	74.69115	31.03573	13:12:00	D	2.90
21	FIROZPUR	FIROZPUR	S-NPP	74.69014	31.03962	13:12:00	D	2.90
22	LUDHIANA	KHANNA	S-NPP	76.11038	30.61564	13:12:00	D	3.40
23	LUDHIANA	KHANNA	S-NPP	76.11538	30.61657	13:12:00	D	3.40
24	LUDHIANA	KHANNA	S-NPP	76.27056	30.73162	13:12:00	D	2.90
25	MANSA	SARDULGARH	S-NPP	75.37428	29.75070	13:12:00	D	4.20

26	PATIALA	NABHA	S-NPP	76.00615	30.34147	13:12:00	D	22.10
27	PATIALA	NABHA	S-NPP	76.00830	30.34333	13:12:00	D	43.80
28	PATIALA	NABHA	S-NPP	76.00524	30.34515	13:12:00	D	22.10
29	PATIALA	NABHA	S-NPP	76.03006	30.36285	13:12:00	D	7.70
30	PATIALA	NABHA	S-NPP	76.25526	30.46972	13:12:00	D	4.80
31	PATIALA	NABHA	S-NPP	76.17693	30.52617	13:12:00	D	4.30
32	PATIALA	NABHA	S-NPP	76.17605	30.52982	13:12:00	D	3.60
33	PATIALA	PATIALA	S-NPP	76.62579	30.15354	13:12:00	D	2.50
34	PATIALA	PATIALA	S-NPP	76.49870	30.22068	13:12:00	D	4.40
35	PATIALA	PATIALA	S-NPP	76.50072	30.22107	13:12:00	D	10.80
36	PATIALA	PATIALA	S-NPP	76.48492	30.24456	13:12:00	D	4.50
37	PATIALA	PATIALA	S-NPP	76.26740	30.28272	13:12:00	D	3.70
38	PATIALA	PATIALA	S-NPP	76.26499	30.28388	13:12:00	D	5.80
39	PATIALA	PATIALA	S-NPP	76.28103	30.31192	13:12:00	D	3.30
40	PATIALA	SAMANA	S-NPP	76.18147	29.84119	13:12:00	D	2.60
41	PATIALA	SAMANA	S-NPP	76.20223	29.86434	13:12:00	D	3.50
42	PATIALA	SAMANA	S-NPP	76.08077	30.15788	13:12:00	D	4.30
43	SANGRUR	MOONAK	S-NPP	76.00992	29.80098	13:12:00	D	2.80
44	SANGRUR	MOONAK	S-NPP	75.96528	29.85091	13:12:00	D	5.00
45	SANGRUR	SANGRUR	S-NPP	76.04240	30.22778	13:12:00	D	4.50
46	SANGRUR	SUNAM	S-NPP	75.87243	29.98941	13:12:00	D	3.60
47	SANGRUR	SUNAM	S-NPP	75.87508	29.99019	13:12:00	D	2.70
48	SAS NAGAR	DERABASSI	S-NPP	76.85417	30.50410	13:12:00	D	1.70
49	SAS NAGAR	DERABASSI	S-NPP	76.77543	30.56761	13:12:00	D	1.80
50	SAS NAGAR	DERABASSI	S-NPP	76.76553	30.61913	13:12:00	D	3.90
51	TARN TARAN	KHADOOR SAHIB	S-NPP	75.01343	31.35302	13:12:00	D	3.00
52	TARN TARAN	KHADOOR SAHIB	S-NPP	75.09229	31.36009	13:12:00	D	2.90
53	TARN TARAN	KHADOOR SAHIB	S-NPP	75.07559	31.41431	13:12:00	D	8.90

54	TARN TARAN	KHADOOR SAHIB	S-NPP	75.07461	31.41809	13:12:00	D	8.90
55	TARN TARAN	KHADOOR SAHIB	S-NPP	75.15131	31.45267	13:12:00	D	3.80
56	TARN TARAN	KHADOOR SAHIB	S-NPP	75.15672	31.45370	13:12:00	D	3.80
57	TARN TARAN	KHADOOR SAHIB	S-NPP	75.18278	31.46263	13:12:00	D	7.40
58	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10591	31.48623	13:12:00	D	2.40
59	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10793	31.48795	13:12:00	D	5.90
60	TARN TARAN	PATTI	S-NPP	74.55206	31.15744	13:12:00	D	7.20
61	TARN TARAN	PATTI	S-NPP	74.55366	31.15894	13:12:00	D	5.80
62	TARN TARAN	PATTI	S-NPP	74.63255	31.22264	13:12:00	D	3.50

**District-wise cumulative number of residue burning events in Punjab (30-Sep-2018 to 13-Oct-2018)**







**Details of residue burning events in Haryana on 13-Oct-2018**

<b>Event S. No.</b>	<b>District</b>	<b>Tehsil / Block</b>	<b>Satellite</b>	<b>Longitude</b>	<b>Latitude</b>	<b>Time (IST)</b>	<b>Day/Night</b>	<b>Fire Power (W/m<sup>2</sup>)</b>
1	AMBALA	AMBALA	S-NPP	76.60190	30.07783	13:12:00	D	8.90
2	AMBALA	NARAYANGARH	S-NPP	77.17101	30.41260	13:12:00	D	2.40
3	BHIWANI	BAWANI_KHERA	S-NPP	76.03482	28.93537	13:12:00	D	2.40
4	FARIDABAD	HODAL	S-NPP	77.45509	27.87446	13:12:00	D	4.30
5	FARIDABAD	HODAL	S-NPP	77.52381	27.93958	13:12:00	D	9.00
6	FARIDABAD	HODAL	S-NPP	77.52843	27.94041	13:12:00	D	9.00
7	FATEHABAD	RATIA	S-NPP	75.66586	29.71314	13:12:00	D	3.80
8	FATEHABAD	TOHANA	S-NPP	75.82725	29.63404	13:12:00	D	3.10
9	FATEHABAD	TOHANA	S-NPP	75.69319	29.67079	13:12:00	D	8.40
10	FATEHABAD	TOHANA	S-NPP	75.69226	29.67457	13:12:00	D	32.70
11	FATEHABAD	TOHANA	S-NPP	75.86980	29.69655	13:12:00	D	13.30
12	HISAR	NARNAUND	S-NPP	76.15720	29.21614	13:12:00	D	2.80
13	JIND	NARWANA	S-NPP	75.96228	29.68659	13:12:00	D	15.70
14	JIND	NARWANA	S-NPP	76.00291	29.68669	13:12:00	D	2.00
15	JIND	NARWANA	S-NPP	76.00559	29.68681	13:12:00	D	5.50
16	JIND	SAFIDON	S-NPP	76.58791	29.46248	13:12:00	D	5.70
17	KAITHAL	GUHLA	S-NPP	76.24036	29.90216	13:12:00	D	5.60
18	KAITHAL	GUHLA	S-NPP	76.24683	29.91869	13:12:00	D	8.80
19	KAITHAL	GUHLA	S-NPP	76.23089	29.91959	13:12:00	D	2.80
20	KAITHAL	GUHLA	S-NPP	76.24594	29.92236	13:12:00	D	8.80
21	KAITHAL	GUHLA	S-NPP	76.25006	29.92695	13:12:00	D	4.00
22	KAITHAL	GUHLA	S-NPP	76.26508	29.92971	13:12:00	D	3.50
23	KAITHAL	GUHLA	S-NPP	76.26242	29.94071	13:12:00	D	5.60
24	KAITHAL	GUHLA	S-NPP	76.25151	29.94254	13:12:00	D	2.20
25	KAITHAL	GUHLA	S-NPP	76.25158	29.95613	13:12:00	D	1.20
26	KAITHAL	GUHLA	S-NPP	76.21383	29.96054	13:12:00	D	4.30
27	KAITHAL	GUHLA	S-NPP	76.22710	29.97071	13:12:00	D	3.70
28	KAITHAL	GUHLA	S-NPP	76.23212	29.97165	13:12:00	D	8.80

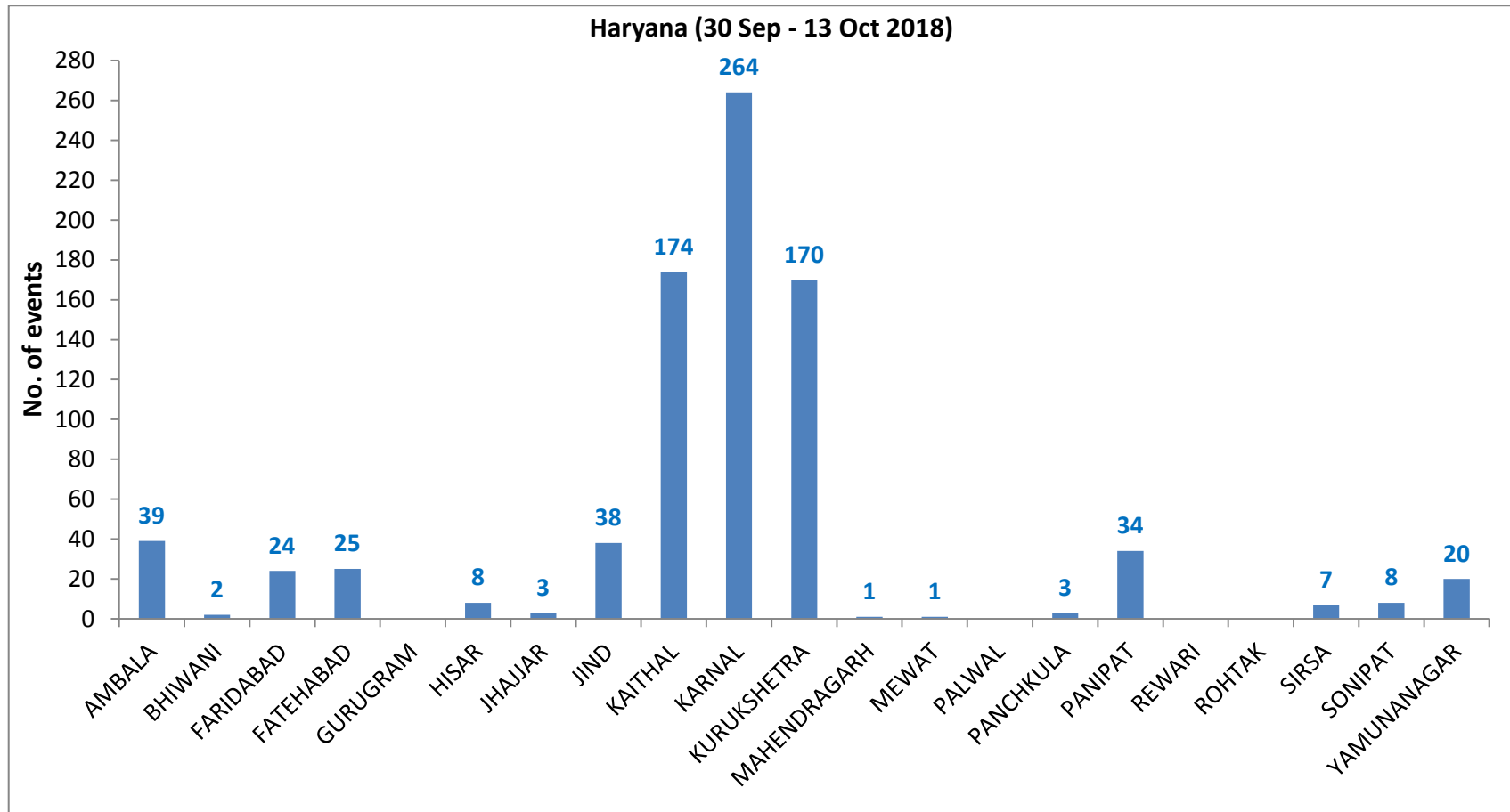
29	KAITHAL	GUHLA	S-NPP	76.23123	29.97531	13:12:00	D	8.80
30	KAITHAL	GUHLA	S-NPP	76.36560	30.00034	13:12:00	D	3.40
31	KAITHAL	GUHLA	S-NPP	76.38360	30.01129	13:12:00	D	1.90
32	KAITHAL	GUHLA	S-NPP	76.24236	30.01569	13:12:00	D	4.10
33	KAITHAL	GUHLA	S-NPP	76.24735	30.01661	13:12:00	D	4.10
34	KAITHAL	GUHLA	S-NPP	76.42210	30.02221	13:12:00	D	10.80
35	KAITHAL	GUHLA	S-NPP	76.42123	30.02584	13:12:00	D	10.80
36	KAITHAL	GUHLA	S-NPP	76.46115	30.09376	13:12:00	D	4.50
37	KAITHAL	GUHLA	S-NPP	76.28288	30.09393	13:12:00	D	2.60
38	KAITHAL	GUHLA	S-NPP	76.43403	30.10020	13:12:00	D	2.30
39	KAITHAL	GUHLA	S-NPP	76.42952	30.10600	13:12:00	D	9.10
40	KAITHAL	GUHLA	S-NPP	76.27933	30.10854	13:12:00	D	7.50
41	KAITHAL	GUHLA	S-NPP	76.44246	30.11597	13:12:00	D	10.50
42	KAITHAL	GUHLA	S-NPP	76.36352	30.12413	13:12:00	D	5.40
43	KAITHAL	KAITHAL	S-NPP	76.51430	29.59890	13:12:00	D	5.20
44	KAITHAL	KAITHAL	S-NPP	76.66967	29.67274	13:12:00	D	5.90
45	KAITHAL	KAITHAL	S-NPP	76.68052	29.71952	13:12:00	D	2.60
46	KAITHAL	KAITHAL	S-NPP	76.67162	29.77812	13:12:00	D	5.90
47	KAITHAL	KAITHAL	S-NPP	76.37532	29.78765	13:12:00	D	3.50
48	KAITHAL	KAITHAL	S-NPP	76.44546	29.82107	01:54:00	N	0.60
49	KAITHAL	KAITHAL	S-NPP	76.63735	29.82473	13:12:00	D	4.50
50	KAITHAL	KAITHAL	S-NPP	76.27728	29.82691	13:12:00	D	3.90
51	KAITHAL	KAITHAL	S-NPP	76.27639	29.83058	13:12:00	D	3.90
52	KAITHAL	KAITHAL	S-NPP	76.23946	29.83148	13:12:00	D	3.90
53	KAITHAL	KAITHAL	S-NPP	76.41834	29.84512	13:12:00	D	6.40
54	KAITHAL	KAITHAL	S-NPP	76.42328	29.84602	13:12:00	D	6.10
55	KAITHAL	KAITHAL	S-NPP	76.26190	29.84709	13:12:00	D	11.40
56	KAITHAL	KAITHAL	S-NPP	76.25871	29.84804	13:12:00	D	6.50
57	KAITHAL	KAITHAL	S-NPP	76.26371	29.84899	13:12:00	D	6.50
58	KAITHAL	KAITHAL	S-NPP	76.32018	29.86536	13:12:00	D	20.30
59	KAITHAL	KAITHAL	S-NPP	76.31689	29.86662	13:12:00	D	21.80

60	KAITHAL	KAITHAL	S-NPP	76.25338	29.87006	13:12:00	D	4.90
61	KAITHAL	KAITHAL	S-NPP	76.51488	29.87031	13:12:00	D	3.60
62	KAITHAL	KAITHAL	S-NPP	76.47081	29.95598	13:12:00	D	3.70
63	KARNAL	ASSANDH	S-NPP	76.56182	29.49444	13:12:00	D	3.30
64	KARNAL	ASSANDH	S-NPP	76.59521	29.50439	13:12:00	D	5.20
65	KARNAL	ASSANDH	S-NPP	76.56036	29.54353	13:12:00	D	9.00
66	KARNAL	ASSANDH	S-NPP	76.54478	29.54449	13:12:00	D	1.80
67	KARNAL	ASSANDH	S-NPP	76.59201	29.56066	13:12:00	D	5.60
68	KARNAL	ASSANDH	S-NPP	76.63589	29.56861	13:12:00	D	6.50
69	KARNAL	ASSANDH	S-NPP	76.70632	29.57004	13:12:00	D	2.80
70	KARNAL	ASSANDH	S-NPP	76.76464	29.59936	13:12:00	D	3.80
71	KARNAL	ASSANDH	S-NPP	76.65835	29.61410	13:12:00	D	4.20
72	KARNAL	ASSANDH	S-NPP	76.68736	29.61943	13:12:00	D	2.30
73	KARNAL	ASSANDH	S-NPP	76.68534	29.64921	13:12:00	D	8.60
74	KARNAL	GHARAUNDA	S-NPP	77.01543	29.53540	13:12:00	D	3.00
75	KARNAL	GHARAUNDA	S-NPP	77.06612	29.54811	13:12:00	D	3.10
76	KARNAL	GHARAUNDA	S-NPP	76.86054	29.59411	13:12:00	D	3.30
77	KARNAL	INDRI	S-NPP	77.09391	29.85626	01:54:00	N	0.50
78	KARNAL	INDRI	S-NPP	77.01590	29.89748	13:12:00	D	2.20
79	KARNAL	INDRI	S-NPP	77.03086	29.93712	13:12:00	D	2.30
80	KARNAL	INDRI	S-NPP	77.02921	29.94422	13:12:00	D	2.40
81	KARNAL	KARNAL	S-NPP	76.82465	29.59888	13:12:00	D	1.90
82	KARNAL	KARNAL	S-NPP	76.86497	29.61734	13:12:00	D	3.80
83	KARNAL	KARNAL	S-NPP	76.79951	29.63249	13:12:00	D	3.80
84	KARNAL	KARNAL	S-NPP	77.02316	29.63439	13:12:00	D	4.50
85	KARNAL	KARNAL	S-NPP	76.86783	29.63751	13:12:00	D	4.90
86	KARNAL	KARNAL	S-NPP	76.79781	29.63968	13:12:00	D	3.70
87	KARNAL	KARNAL	S-NPP	76.81213	29.64229	13:12:00	D	2.50
88	KARNAL	KARNAL	S-NPP	76.98188	29.65460	13:12:00	D	4.80
89	KARNAL	KARNAL	S-NPP	76.98366	29.65707	13:12:00	D	6.10
90	KARNAL	KARNAL	S-NPP	76.81744	29.66199	13:12:00	D	1.90

91	KARNAL	KARNAL	S-NPP	76.94397	29.67003	13:12:00	D	2.80
92	KARNAL	KARNAL	S-NPP	76.94314	29.67360	13:12:00	D	2.50
93	KARNAL	KARNAL	S-NPP	76.70915	29.67612	13:12:00	D	6.30
94	KARNAL	KARNAL	S-NPP	76.81374	29.69875	13:12:00	D	5.80
95	KARNAL	KARNAL	S-NPP	76.83839	29.69944	13:12:00	D	3.40
96	KARNAL	KARNAL	S-NPP	76.84315	29.70030	13:12:00	D	3.40
97	KARNAL	KARNAL	S-NPP	76.83755	29.70302	13:12:00	D	3.40
98	KARNAL	KARNAL	S-NPP	76.84231	29.70388	13:12:00	D	3.40
99	KARNAL	KARNAL	S-NPP	76.75123	29.70999	13:12:00	D	4.90
100	KARNAL	KARNAL	S-NPP	76.80473	29.71583	13:12:00	D	4.30
101	KARNAL	KARNAL	S-NPP	76.69582	29.71857	13:12:00	D	2.70
102	KARNAL	KARNAL	S-NPP	76.86962	29.73490	13:12:00	D	2.90
103	KARNAL	KARNAL	S-NPP	76.86878	29.73848	13:12:00	D	2.90
104	KARNAL	KARNAL	S-NPP	76.87352	29.73932	13:12:00	D	2.90
105	KARNAL	KARNAL	S-NPP	76.87020	29.73935	13:12:00	D	4.70
106	KARNAL	KARNAL	S-NPP	77.00790	29.75206	13:12:00	D	2.20
107	KARNAL	KARNAL	S-NPP	77.02659	29.75538	13:12:00	D	6.20
108	KARNAL	KARNAL	S-NPP	77.07953	29.75737	13:12:00	D	4.00
109	KARNAL	KARNAL	S-NPP	77.09346	29.75984	13:12:00	D	2.50
110	KARNAL	KARNAL	S-NPP	76.76098	29.76054	13:12:00	D	2.60
111	KARNAL	KARNAL	S-NPP	77.01558	29.76083	13:12:00	D	2.50
112	KARNAL	NILOKHERI	S-NPP	76.92165	29.74416	13:12:00	D	2.00
113	KARNAL	NILOKHERI	S-NPP	76.92636	29.74500	13:12:00	D	6.60
114	KARNAL	NILOKHERI	S-NPP	76.86179	29.77512	13:12:00	D	3.80
115	KARNAL	NILOKHERI	S-NPP	76.86568	29.77956	13:12:00	D	3.80
116	KARNAL	NILOKHERI	S-NPP	76.86010	29.78228	13:12:00	D	6.70
117	KARNAL	NILOKHERI	S-NPP	76.75247	29.79648	13:12:00	D	2.60
118	KARNAL	NILOKHERI	S-NPP	76.73640	29.80108	13:12:00	D	3.60
119	KARNAL	NILOKHERI	S-NPP	76.89455	29.80341	13:12:00	D	6.00
120	KARNAL	NILOKHERI	TERRA	76.86031	29.80913	11:32:00	D	16.32
121	KARNAL	NILOKHERI	S-NPP	76.87786	29.81157	13:12:00	D	7.10

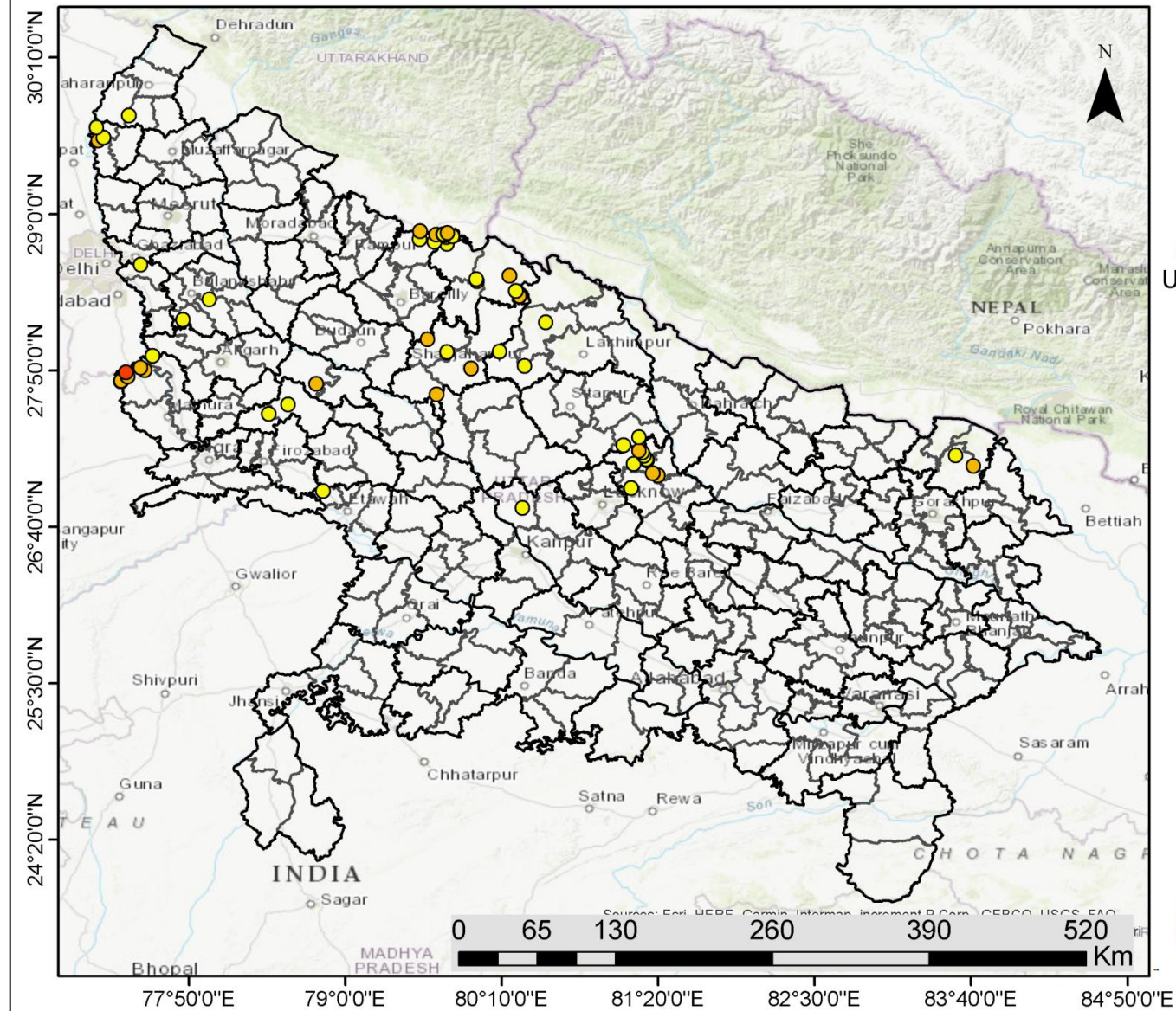
122	KARNAL	NILOKHERI	S-NPP	76.85379	29.87927	13:12:00	D	8.60
123	KURUKSHETRA	PEHOWA	S-NPP	76.48757	29.92875	13:12:00	D	3.90
124	KURUKSHETRA	PEHOWA	S-NPP	76.68958	29.95075	13:12:00	D	3.00
125	KURUKSHETRA	PEHOWA	S-NPP	76.51396	30.00134	13:12:00	D	3.00
126	KURUKSHETRA	PEHOWA	S-NPP	76.69420	30.01531	13:12:00	D	3.00
127	KURUKSHETRA	PEHOWA	S-NPP	76.52162	30.03299	13:12:00	D	3.40
128	KURUKSHETRA	SHAHABAD	S-NPP	76.82372	30.12914	13:12:00	D	4.50
129	KURUKSHETRA	SHAHABAD	S-NPP	76.82674	30.13711	13:12:00	D	6.40
130	KURUKSHETRA	THANESAR	S-NPP	76.77361	29.88340	13:12:00	D	6.90
131	KURUKSHETRA	THANESAR	S-NPP	76.86240	29.88456	13:12:00	D	4.60
132	KURUKSHETRA	THANESAR	S-NPP	76.86713	29.88541	13:12:00	D	4.30
133	KURUKSHETRA	THANESAR	S-NPP	76.72241	29.88910	13:12:00	D	3.70
134	KURUKSHETRA	THANESAR	S-NPP	76.76714	29.88970	13:12:00	D	3.50
135	KURUKSHETRA	THANESAR	S-NPP	76.84957	29.89714	13:12:00	D	1.60
136	KURUKSHETRA	THANESAR	S-NPP	76.82420	29.90001	13:12:00	D	3.80
137	KURUKSHETRA	THANESAR	S-NPP	76.92854	29.93735	13:12:00	D	1.70
138	KURUKSHETRA	THANESAR	S-NPP	77.06769	29.96582	13:12:00	D	5.90
139	KURUKSHETRA	THANESAR	S-NPP	77.08519	30.00038	13:12:00	D	4.60
140	KURUKSHETRA	THANESAR	S-NPP	77.08339	30.00174	13:12:00	D	5.80
141	KURUKSHETRA	THANESAR	TERRA	77.01072	30.01485	11:32:00	D	16.38
142	KURUKSHETRA	THANESAR	S-NPP	76.84413	30.08449	13:12:00	D	1.70
143	PANIPAT	PANIPAT	S-NPP	76.85777	29.47493	01:54:00	N	0.70
144	SONIPAT	GANAUR	S-NPP	76.95385	29.12241	13:12:00	D	4.50
145	SONIPAT	SONIPAT	S-NPP	76.89999	29.09753	13:12:00	D	13.00
146	SONIPAT	SONIPAT	S-NPP	76.90221	29.09814	13:12:00	D	13.50
147	YAMUNANAGAR	JAGADHRI	S-NPP	77.12530	29.98705	13:12:00	D	2.50

**District-wise cumulative number of residue burning events in Haryana (30-Sep-2018 to 13-Oct-2018)**



(c) Uttar Pradesh

PADDY RESIDUE BURNING IN UTTAR PRADESH



61 burning events detected in Uttar Pradesh on 13th Oct, 2018

FIRE INTENSITY (W/m<sup>2</sup>)

- 1 - 4
- 5 - 8
- 9 - 12
- 13 - 16
- 17 - 20



<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

**Details of residue burning events in Uttar Pradesh on 13-Oct-2018**

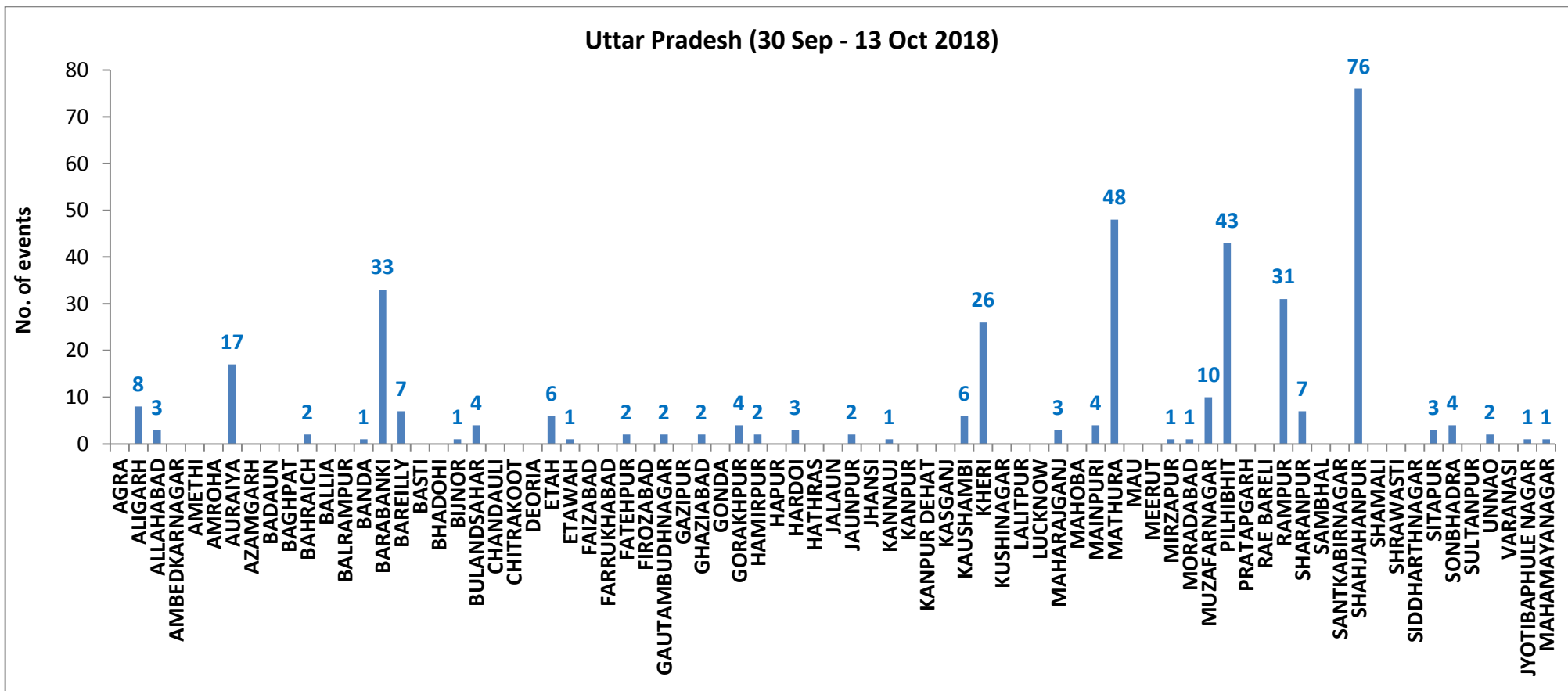
<b>Event S. No.</b>	<b>District</b>	<b>Tehsil / Block</b>	<b>Satellite</b>	<b>Longitude</b>	<b>Latitude</b>	<b>Time (IST)</b>	<b>Day/Night</b>	<b>Fire Power (W/m<sup>2</sup>)</b>
1	ALIGARH	KHAIR	S-NPP	77.56150	27.94260	13:12:00	D	2.60
2	BARABANKI	FATEHPUR	S-NPP	81.14890	27.13633	13:12:00	D	3.10
3	BARABANKI	FATEHPUR	S-NPP	81.25131	27.16204	13:12:00	D	1.60
4	BARABANKI	FATEHPUR	S-NPP	81.24944	27.17196	13:12:00	D	1.40
5	BARABANKI	FATEHPUR	S-NPP	81.22962	27.19744	01:54:00	N	0.70
6	BARABANKI	FATEHPUR	S-NPP	81.21564	27.22399	13:12:00	D	2.80
7	BARABANKI	FATEHPUR	S-NPP	81.18996	27.23368	13:12:00	D	6.50
8	BARABANKI	NAWABGANJ	S-NPP	81.13052	26.95766	13:12:00	D	2.60
9	BARABANKI	RAMNAGAR	S-NPP	81.33144	27.05208	13:12:00	D	5.90
10	BARABANKI	RAMNAGAR	S-NPP	81.29299	27.06665	13:12:00	D	4.50
11	BAREILLY	BAHERI	S-NPP	79.66477	28.79234	13:12:00	D	2.30
12	BAREILLY	BAHERI	S-NPP	79.55396	28.81119	13:12:00	D	2.50
13	BAREILLY	BAHERI	S-NPP	79.55759	28.87368	13:12:00	D	5.10
14	BULANSAHAR	BULANSHAHR	S-NPP	77.98668	28.36271	13:12:00	D	3.20
15	BULANSAHAR	KHURJA	S-NPP	77.79189	28.21227	13:12:00	D	2.30
16	ETAH	ETAH	S-NPP	78.57441	27.57904	13:12:00	D	2.80
17	ETAH	JALESAR	S-NPP	78.42801	27.50953	13:12:00	D	2.00
18	ETAH	JALESAR	S-NPP	78.42932	27.51110	13:12:00	D	3.20
19	ETAH	KASGANJ	S-NPP	78.78255	27.73353	13:12:00	D	5.10
20	ETAWAH	JASWANTNAGAR	S-NPP	78.83217	26.93490	13:12:00	D	2.60
21	GAUTAMBUDHNAGAR	DADRI	S-NPP	77.47298	28.62320	01:54:00	N	1.00



22	KHERI	GOLA	S-NPP	80.33727	27.86775	13:12:00	D	1.90
23	KHERI	GOLA	S-NPP	80.49458	28.19344	13:12:00	D	3.40
24	KHERI	MOHMADI	S-NPP	80.15052	27.97394	13:12:00	D	2.00
25	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.55364	27.19909	13:12:00	D	3.70
26	MAHARAJGANJ	NICHLAUL	S-NPP	83.68394	27.12108	13:12:00	D	4.30
27	MATHURA	CHHATA	S-NPP	77.32621	27.75415	13:12:00	D	3.60
28	MATHURA	CHHATA	S-NPP	77.32848	27.75415	13:12:00	D	5.20
29	MATHURA	CHHATA	S-NPP	77.33092	27.75500	13:12:00	D	5.00
30	MATHURA	CHHATA	S-NPP	77.32767	27.75775	13:12:00	D	5.20
31	MATHURA	CHHATA	S-NPP	77.37698	27.78960	13:12:00	D	4.50
32	MATHURA	CHHATA	S-NPP	77.36498	27.82112	13:12:00	D	12.50
33	MATHURA	CHHATA	S-NPP	77.50732	27.83538	13:12:00	D	6.60
34	MATHURA	CHHATA	S-NPP	77.47387	27.85546	13:12:00	D	4.70
35	MUZAFARNAGAR	KAIRANA	S-NPP	77.15784	29.54956	13:12:00	D	4.60
36	MUZAFARNAGAR	KAIRANA	S-NPP	77.19621	29.57108	13:12:00	D	1.80
37	MUZAFARNAGAR	KAIRANA	S-NPP	77.14670	29.64527	13:12:00	D	2.60
38	PILHIBHIT	PILHIBHIT	S-NPP	79.75846	28.77639	13:12:00	D	1.20
39	PILHIBHIT	PILHIBHIT	S-NPP	79.75206	28.82928	13:12:00	D	4.60
40	PILHIBHIT	PILHIBHIT	S-NPP	79.80039	28.83357	13:12:00	D	1.70
41	PILHIBHIT	PILHIBHIT	S-NPP	79.74468	28.84524	13:12:00	D	10.50
42	PILHIBHIT	PILHIBHIT	S-NPP	79.73605	28.84729	13:12:00	D	3.50
43	PILHIBHIT	PILHIBHIT	S-NPP	79.67829	28.84834	13:12:00	D	4.30
44	PILHIBHIT	PILHIBHIT	S-NPP	79.73140	28.84997	13:12:00	D	3.60
45	PILHIBHIT	PILHIBHIT	S-NPP	79.73538	28.85061	13:12:00	D	3.60

46	PILHIBHIT	PILHIBHIT	S-NPP	79.76253	28.85837	13:12:00	D	6.60
47	PILHIBHIT	PURANPUR	S-NPP	80.29994	28.38683	13:12:00	D	5.80
48	PILHIBHIT	PURANPUR	S-NPP	80.29929	28.39013	13:12:00	D	5.50
49	PILHIBHIT	PURANPUR	S-NPP	80.27178	28.42675	13:12:00	D	2.10
50	PILHIBHIT	PURANPUR	S-NPP	79.98522	28.50073	13:12:00	D	4.50
51	PILHIBHIT	PURANPUR	S-NPP	79.97792	28.51668	13:12:00	D	3.20
52	PILHIBHIT	PURANPUR	S-NPP	80.22476	28.54172	13:12:00	D	5.20
53	SHAHJAHANPUR	JALALABAD	S-NPP	79.67916	27.65407	13:12:00	D	4.60
54	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	79.93974	27.84942	13:12:00	D	5.60
55	SHAHJAHANPUR	TILHAR	S-NPP	79.76048	27.96900	13:12:00	D	4.10
56	SHAHJAHANPUR	TILHAR	S-NPP	79.75980	27.97233	13:12:00	D	1.90
57	SHAHJAHANPUR	TILHAR	S-NPP	79.61297	28.06727	13:12:00	D	8.00
58	SHARANPUR	RAMPUR MANIHARRAN	S-NPP	77.38559	29.73468	13:12:00	D	2.40
59	SITAPUR	MAHMUDABAD	S-NPP	81.07432	27.27727	13:12:00	D	2.10
60	SITAPUR	MAHMUDABAD	S-NPP	81.19067	27.33548	13:12:00	D	1.80
61	UNNAO	SAFIPUR	S-NPP	80.32192	26.80819	13:12:00	D	2.20

**District-wise cumulative number of residue burning events in Uttar Pradesh (30-Sep-2018 to 13-Oct-2018)**



**State wise, date wise and district-wise number of residue burning events detected in 2017 and 2018**  
**(Period: 30-Sep-2018 to 13-Oct-2018)**

Date	Punjab		Haryana		UP		Total	
	2017	2018	2017	2018	2017	2018	2017	2018
<b>30-Sep-18</b>	--	11	---	7	---	13	---	31
<b>1-Oct-18</b>	54	16	13	9	2	11	69	36
<b>2-Oct-18</b>	50	9	27	23	8	21	85	53
<b>3-Oct-18</b>	62	4	40	9	17	12	119	25
<b>4-Oct-18</b>	103	32	60	16	22	5	185	53
<b>5-Oct-18</b>	106	56	68	30	20	10	194	96
<b>6-Oct-18</b>	138	87	75	65	39	13	252	165
<b>7-Oct-18</b>	105	162	97	180	31	69	233	411
<b>8-Oct-18</b>	215	39	218	40	75	54	508	133
<b>9-Oct-18</b>	163	75	148	47	87	32	398	154
<b>10-Oct-18</b>	164	23	151	37	126	21	441	81
<b>11-Oct-18</b>	177	30	87	78	74	24	338	132
<b>12-Oct-18</b>	342	67	123	133	51	22	516	222
<b>13-Oct-18</b>	470	62	207	147	69	61	746	270
<b>Total</b>	<b>2149</b>	<b>673</b>	<b>1314</b>	<b>821</b>	<b>625</b>	<b>368</b>	<b>4088</b>	<b>1862</b>

**(a) Punjab**

Districts	01 - 13 Oct	
	2017	2018
AMRITSAR	379	322
BARNALA	6	1
BATHINDA	98	12
FARIDKOT	305	5
FATEHGARH SAHIB	70	11
FAZILKA	0	0
FIROZPUR	245	33
GURDASPUR	48	26
HOSHIARPUR	5	3
JALANDHAR	89	1
KAPURTHALA	29	2
LUDHIANA	128	23
MANSA	33	4
MOGA	27	0
MUKTSAR	37	3
NAWASHAHR	10	4
PATHANKOT	0	0
PATIALA	250	67
RUPNAGAR	3	0
SANGRUR	93	34
SAS NAGAR	32	21
TARN TARAN	251	97
SBS NAGAR	11	4
<b>Total</b>	<b>2149</b>	<b>673</b>

**(b) Haryana**

Districts	01 - 13 Oct	
	2017	2018
AMBALA	98	39
BHIWANI	2	2
FARIDABAD	13	24
FATEHABAD	52	25
GURUGRAM	0	0
HISAR	12	8
JHAJJAR	0	3
JIND	65	38
KAITHAL	277	174
KARNAL	435	264
KURUKSHETRA	285	170
MAHENDRAGARH	0	1
MEWAT	0	1
PALWAL	0	0
PANCHKULA	0	3
PANIPAT	20	34
REWARI	0	0
ROHTAK	1	0
SIRSA	12	7
SONIPAT	8	8
YAMUNANAGAR	34	20
<b>Total</b>	<b>1314</b>	<b>821</b>

**(c) Uttar Pradesh**

Districts	01 - 13 Oct		FIROZABAD	0	0	PRATAPGARH	0	0
	2017	2018						
AGRA	0	0	GAZIPUR	0	0	RAMPUR	87	31
ALIGARH	8	8	GHAZIABAD	1	2	SHARANPUR	9	7
ALLAHABAD	0	3	GONDA	0	0	SAMBHAL	0	0
AMBEDKAR NAGAR	1	0	GORAKHPUR	2	4	SANTKABIR NAGAR	0	0
AMETHI	0	0	HAMIRPUR	0	2	SHAHJAHANPUR	217	76
AMROHA	0	0	HAPUR	0	0	SHAMALI	0	0
AURAIYA	31	17	HARDOI	2	3	SHRAWASTI	0	0
AZAMGARH	0	0	HATHRAS	0	0	SIDDHARTH NAGAR	0	0
BADAUN	0	0	JALAUN	0	0	SITAPUR	4	3
BAGHPAT	0	0	JAUNPUR	0	2	SONBHADRA	1	4
BAHRAICH	0	2	JHANSI	0	0	SULTANPUR	0	0
BALLIA	0	0	KANNAUJ	0	1	UNNAO	0	2
BALRAMPUR	0	0	KANPUR	0	0	VARANASI	0	0
BANDA	0	1	KANPUR DEHAT	1	0	JYOTIBAPHULE NAGAR	0	1
BARABANKI	13	33	KASGANJ	0	0	MAHAMAYA NAGAR	0	1
BAREILLY	16	7	KAUSHAMBI	2	6	Total	625	368
BASTI	0	0	KHERI	62	26			
BHADOHI	0	0	KUSHINAGAR	1	0			
BIJNOR	0	1	LALITPUR	0	0			
BULANDSAHAR	2	4	LUCKNOW	4	0			
CHANDAULI	0	0	MAHARAJGANJ	1	3			
CHITRAKOOT	0	0	MAHOBA	0	0			
DEORIA	0	0	MAINPURI	2	4			
ETAH	1	6	MATHURA	15	48			
ETAWAH	2	1	MAU	0	0			
FAIZABAD	1	0	MEERUT	4	0			
FARRUKHABAD	0	0	MIRZAPUR	1	1			
FATEHPUR	3	2	MORADABAD	3	1			
			MUZAFARNAGAR	28	10			
			PILHIBHIT	100	43			

## The study used images received from following Satellites at IARI Satellite Ground Station

S. No.	Satellite Name	Sensor	Resolution (meter)	Day / Night Passes
1.	Suomi NPP	VIIRS	375 / 1000	Both
2.	Terra	MODIS	1000	Both
3.	Aqua	MODIS	1000	Both
4.	NOAA – 18	AVHRR	1000	Night
5.	NOAA – 19	AVHRR	1000	Night
6.	Metop - 1	AVHRR	1000	Night
7.	Metop - 2	AVHRR	1000	Night

### Study Team

ICAR – HQ	Dr K. Alagusundaram	DDG (Agril. Engg.)	<a href="mailto:ddgengg@icar.org.in">ddgengg@icar.org.in</a>
	Dr S. Bhaskar	ADG (NRM)	<a href="mailto:adgagroandaf@gmail.com">adgagroandaf@gmail.com</a>
ICAR - IARI	Dr V.K. Sehgal	Professor & Nodal Scientist	<a href="mailto:iaricreams@gmail.com">iaricreams@gmail.com</a> <a href="mailto:vk.sehgal@icar.gov.in">vk.sehgal@icar.gov.in</a>
	Dr Rajkumar Dhakar	Scientist	<a href="mailto:rajdhakar.iari@gmail.com">rajdhakar.iari@gmail.com</a>
	Shri Rakeshwar Verma	Chief Technical Officer	<a href="mailto:rakeshwar.verma@icar.gov.in">rakeshwar.verma@icar.gov.in</a>
	Mr Aakash Chhabra	SRF (NICRA)	<a href="mailto:aakash.chhabra7489@gmail.com">aakash.chhabra7489@gmail.com</a>
ICAR - ATARI	Dr Rajbir Singh	Director ATARI (Zone-1)	<a href="mailto:rajbirsingh.zpd@gmail.com">rajbirsingh.zpd@gmail.com</a>
	Dr U.S. Gautam	Director ATARI (Zone-IV)	<a href="mailto:zpdicarkanpur@gmail.com">zpdicarkanpur@gmail.com</a>
ICAR - IASRI	Dr Rajender Parsad	Principal Scientist	<a href="mailto:rajender.parsad@icar.gov.in">rajender.parsad@icar.gov.in</a>

GIS Maps of fire events can be visualized online on ICAR KRISHI Geoportal websites:

<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

<http://creams.iari.res.in:8080/geoexplorer/composer/>

\*\*\*